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FISHERY MARKET NEWS

JUNE 1941

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WASHINGTON

UNITED STATES
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FISHERY MARKET NEWS

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FISHERY MARKET NEWS

A REVIEW OF CONDITIONS AND TRENDS OF THE COMMERCIAL FISHERIES

June 1941 Washington, D. C. Vol. 3, No. 6

SUMMARY

Special Article

Effect of Washing and Blowing on Oysters with Special Regard to Mineral Content.--Fishery technologists at the Service's College Park laboratory have concluded from their investigations that controlled washing and blowing of oysters for periods of approximately three minutes in each operation results in reasonable cleaning of the oysters as well as reduction in the number of bacteria in the product without causing any extreme loss of mineral content. It was shown, however, that soaking the oysters for unreasonable periods of time resulted in adulteration with water and also excessive losses of protein and valuable minerals.

Fresh Fish

Deliveries of fishery products at the ports of Boston and Gloucester, Mass., and Portland, Maine, exceeded forty million pounds in April. Vessel landings amounted to 42,773,000 pounds, valued at $1,156,000 to the fishermen.

Chicago receipts of fishery products during April were 4,014,000 pounds or about one-fifth less than receipts in that city during the previous month.

Halibut landings at all North Pacific ports, including United States, Alaska, and Canadian ports during April, the first month of the current halibut season, reached 7,237,000 pounds, a slight decrease from the amount of halibut taken during the first month of last season.

Frozen Fish

May 15 cold-storage holdings of frozen fish and shellfish increased 16 percent over the previous month. Domestic freezers during the month ending May 15, 1941, produced 18,502,000 pounds of frozen fishery products which amounted to approximately twice the freezings during the previous monthly period.

Boston warehouses at the end of May held 18,275,000 pounds of frozen fish and shellfish; New York plants, 4,904,000 pounds; and Chicago cold-storage establishments, 3,485,000 pounds.

Canadian freezers reported holdings of 18½ million pounds of frozen fishery products on June 1.

Canned Fish

Packers' unsold stocks of canned salmon remained at phenominally low levels. Reports as of May 31, 1941, indicated only 136,000 cases of salmon on hand or about one-eighth of the amount inventoried on the corresponding date in 1940. The eleventh month of the 1940-41 shrimp packing season closed on May 31 with a cumulative total production of 915,000 standard cases as compared with 1,097,000 cases packed during the first 11 months of the previous season.

April tuna packing operations in California netted packers of that State 152,000 cases. No mackerel or pilchards were canned during April, which is part of the off season for these operations.

British Columbia reports place 1940-41 canned herring production of that Province up to March 15 at 644,000 cases.

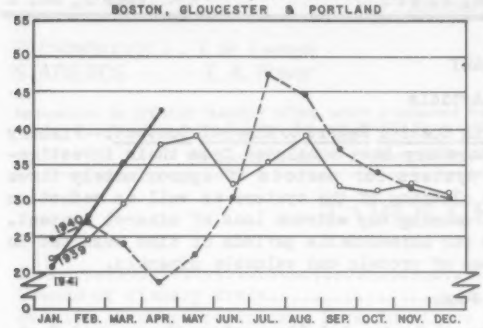
Foreign Fishery Trade

United States foreign trade in April included exports of 5,807,000 pounds of edible fishery products. Imports of similar items during the same month amounted to 21,252,000 pounds.

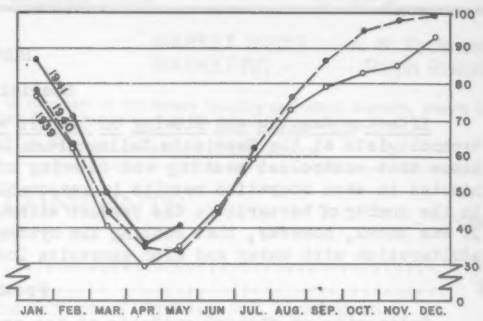
TRENDS OF FISHERY TRADE

In millions of pounds

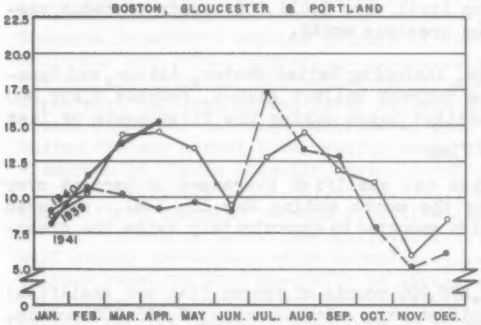
VESSEL LANDINGS, ALL FRESH FISH
BOSTON, GLOUCESTER & PORTLAND



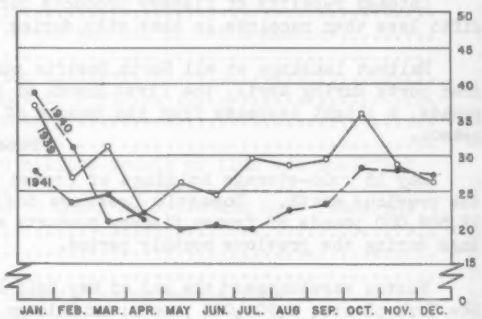
DOMESTIC COLD-STORAGE HOLDINGS OF FROZEN FISH



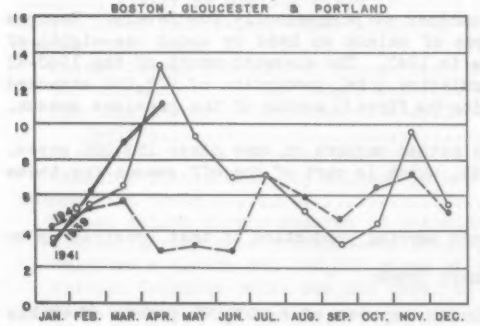
VESSEL LANDINGS, FRESH HADDOCK
BOSTON, GLOUCESTER & PORTLAND



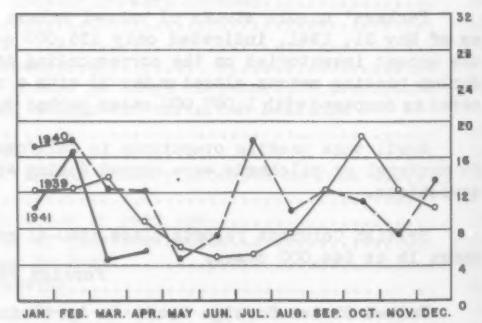
IMPORTS OF EDIBLE FISHERY COMMODITIES



VESSEL LANDINGS, FRESH COD
BOSTON, GLOUCESTER & PORTLAND



EXPORTS OF EDIBLE FISHERY COMMODITIES



RESULTS OF SOME PRELIMINARY EXPERIMENTS ON THE EFFECT OF WASHING AND BLOWING ON THE MINERAL CONTENT OF OYSTERS

By

S. R. Pottinger, J. F. Puncochar, and W. H. Baldwin
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Fish and Wildlife Service

In the preparation of shucked oysters for market, a process known as washing and blowing, more frequently referred to in the industry as washing, is used to insure the consumer of receiving a product that is clean and also having a pleasing appearance. This processing is required because in the harvesting of shell oysters, either by tongs or dredging, a relatively large amount of sand and mud is necessarily taken with the oysters. In subsequent handling, prior to shucking, little effort is made to remove this extraneous matter from the shellstock either in the boat or at the shucking house, and, when allowed to remain on the shells, it may be an important factor in contaminating the oyster meats during shucking, both with bacteria, and grit and dirt.

Oysters are usually shucked into cans or buckets about one-quarter full of fresh water, although in some sections of the country they are generally shucked into perforated, noncorrosive metal containers. The oysters are then poured onto a perforated drainboard or "skimmer", rinsed with fresh water, and any large pieces of shell that may be present are usually removed. In many plants the shucked oysters are then put into a large tank of fresh water and may or may not be stirred with a paddle. Although this washing may only slightly reduce the number of bacteria on the surface of the oyster meats, it removes much of the grit, mud, and pieces of shell which were not removed on the "skimmer."

Following this treatment, the oysters are blown, usually in the same tank that is used for washing. Air is forced through a perforated false bottom into the mixture of oysters and water, further separating and removing extraneous matter from the meats, and markedly reducing the number of bacteria on the surface of the oysters. No definite period of time is used for washing and blowing. The oysters are then ladled onto a skimming table and drained before being packed for shipment. It might be mentioned that in some sections of the country the blowing process is omitted and the shucked oysters are packed for shipment after being given a light washing, followed by draining.

Only limited information dealing specifically with the results of washing and blowing of shucked oysters and the effect on the mineral content can be found in the literature. Hunter and Harrison (1928) determined the loss of ash and salt from shucked oysters due to washing and blowing for various periods of time, but the effect on the mineral content due to this treatment was not reported. Coulson (1934) determined the effect of washing and blowing shucked oysters in fresh water and in weak brine on the iron and iodine content. The least change in composition was found to occur in the oysters that were blown in 0.5 percent brine solution.

Because of the importance of minerals in proper nutrition, a knowledge is desirable of their presence in foods and the quantities in which they occur. Furthermore, data should be available relative to the effects of certain treatments that foods undergo during preparation for market. In an attempt to gain some insight into the mineral content of oysters, both before and after they have been washed and blown, samples of ash from oysters given these treatments were prepared for analysis.

Experimental Procedure

Three-minute periods of washing and blowing were used for all samples, as this was considered to be ample time for these processes. The following procedure was employed: The oysters were shucked into a glass container. The desired quantity was placed in a Buchner funnel and allowed to drain for five minutes, after which the liquor and meats were weighed. A sample of the meats was taken for moisture and ash determinations; the remainder was weighed and put into a large beaker of fresh water for washing. The ratio of meats to water was

approximately one to four. The mixture was stirred during the washing period, drained as before, and the meats weighed. The remaining meats were blown in fresh water, using the same volumes as before. The oysters were then drained and weighed. Moisture and ash contents were determined on this lot and also on the original liquor from the freshly shucked oysters.

Moisture was determined by the toluene distillation method, the sample being prepared from drained oysters that were ground in a meat chopper and mixed thoroughly. For the ash determination, the oysters were heated overnight in an oven at about 100° C. The partly dried material was then heated at dull redness in an electric furnace until the organic matter was burned off and a light-colored ash was obtained. The samples were weighed and then pulverized with an agate mortar and pestle.

Through the cooperation of the U. S. Bureau of Mines, Department of the Interior, these samples were analyzed spectrographically, both qualitatively and semi-quantitatively. The authors wish to thank Mr. Morris Slavin, Associate Spectroscopist, for making these analyses.

A large grating spectrograph with a low voltage D. C. carbon arc was used, the principal photographs being taken in the region of 3600-2300 Å, for the heavy metals. Several of the samples were examined for the rarer alkalies and alkaline earths, using the infrared portion of the spectrum. All of the determinations were qualitative, and estimates of the concentrations of the various minerals were based on previous experience in spectrographic analysis.

Discussion of Data

The data in Table 1 show that washing alone caused an increase in weight of the oysters varying from 1 to about 12 percent, while washing and blowing increased the weight between 2 and 17 percent. Although the moisture content of the oysters increased as a result of washing, there was a further increase upon being blown. The percentage of ash, calculated on the basis of dry matter content of the oysters, was found to decrease considerably due to washing. The loss ranged from 21 to 26 percent of the original value. Washing and blowing caused a greater loss in ash content, varying between 26 and 37 percent of the original figure.

Table 1.

EFFECT OF WASHING AND BLOWING ON WEIGHT, MOISTURE, AND ASH CONTENT OF OYSTERS
(All figures are expressed in percentages)

Item	Source of Oysters				
	Connecticut	New York	Virginia	Georgia	Louisiana
Liquor 1/	34.6	41.2	41.0	37.0	28.0
Meats 1/	65.4	58.8	59.0	63.0	72.0
Increase in weight					
Washed oysters	11.7	none 3/	1.0	8.6	7.4
Blown oysters 2/	16.8	2.1	10.9	15.1	10.6
Moisture					
Unwashed oysters	72.4	71.1	79.0	84.3	80.0
Washed oysters	76.6	75.5	80.8	86.3	83.0
Blown oysters 2/	81.9	82.1	84.2	86.9	84.4
Liquor 1/	--	--	94.4	97.4	93.3
Ash (dry basis)					
Unwashed oysters	6.9	6.9	8.6	5.7	7.0
Washed oysters	5.1	5.3	6.3	4.5	5.4
Blown oysters 2/	5.1	5.0	5.9	3.6	4.7
Liquor 1/	--	--	3.4	3.4	2.2
Decrease in ash					
Washed oysters	26.1	23.2	26.7	21.1	22.9
Blown oysters	26.1	27.5	31.4	36.8	32.9

1/ Obtained during shucking.
2/ Blown after being washed.
3/ Slight decrease.

Various investigators have attributed this decrease in the total ash content of shucked oysters largely to a diminution in salt, presumably meaning sodium chloride or a mixture of several chlorides. Apparently no work had been done on determining the decrease in other elements, with the exception of iodine and iron, as mentioned previously. It was the purpose of the spectrographic analyses to determine if any of the other elements or minerals diminish as a result of washing and blowing.

The results of a spectrographic study of a typical group of samples are shown in Table 2. The bulk composition of all the samples was the same; namely, sodium, potassium, calcium, magnesium, and phosphorus. In addition, 17 other minerals were detected; a variety might be expected as sea water probably contains practically all of the elements. The nutritively essential minerals were present in relatively large amounts in all the samples. The halogens, which include the important element iodine, cannot be determined spectrographically. Of the alkaline earths, barium and cesium were not detected in any sample.

Table 2.

Results of Spectrographic Analyses of Ash from Oyster Meats and Liquor
(All quantities are expressed on the basis of the fresh edible portion)

Treatment	Aluminum	Boron	Calcium	Copper	Gold	Iron	Lithium	Magnesium	Manganese	Nickel	Phosphorus	Platinum	Potassium	Rubidium	Silicon	Silver	Sodium	Strontium	Titanium	Vanadium	Zinc	Zirconium
Unwashed	C	A	D	C	A	C	B	E	B	A	D	O	E	C	C	B	E	B	B	A	B	A
Washed 1/	C	A	D	C	O	C	B	E	B	A	D	O	E	C	D	B	E	B	B	A	B	A
Blown 2/	C	A	D	C	O	C	B	E	B	A	D	O	E	C	D	B	E	B	B	A	B	C
Liquor	C	A	D	B	O	B	B	E	A	A	B	A	E 3/	C	C	A	E	B	A	A	A	O

Parts per million: A, 0.1 to 1; B, 1 to 10; C, 10 to 100; D, above 100; E, 500 or over; and O, not detected.

1/ Washed 3 minutes.
2/ Blown 3 minutes after washing.
3/ Slightly less than 500 parts per million.

Earlier workers in the field of nutrition considered only the following elements to be essential: Calcium, chlorine, iodine, iron, magnesium, phosphorus, potassium, sodium, and sulfur. As a result of more recent work, copper and manganese are also considered as being indispensable, and apparently zinc and cobalt may be necessary. Aluminum, arsenic, barium, bromine, fluorine, nickel, rubidium, selenium, and silicon have been shown to be present in animal tissues. Their role in metabolism has not been established up to the present time, however. All of the nutritionally essential minerals are found in oysters in sufficient amounts to make this food a good source of these minerals.

In the ash from the liquor, several of the minerals were present in smaller quantities than in the ash from the oyster meats (see Table 2). However, sufficient amounts of the nutritionally important elements are present in the liquor from freshly shucked, unwashed oysters to make it valuable as a potential source of the minerals needed in the diet. Large quantities of this liquor may be obtained during shucking (see Table 1). New uses for this product should be found since very little of it is utilized.

The spectrographic analyses did not prove to be sufficiently sensitive to show the comparatively small losses of nutritionally important minerals occurring in oysters as a

result of the washing and blowing processes. These data are of value only in giving the approximate quantities in which the elements occur and in showing the presence of a number of elements not ordinarily determined in the usual chemical analyses.

The results of previous experiments conducted in this laboratory have shown that an average of approximately 33 percent of the ash from freshly shucked, unwashed oysters is composed of salt or chlorides and that about 16 percent remains after short periods of washing and blowing, a reduction amounting to slightly over 50 percent. In many instances, the salt content is reduced by as much as two-thirds of the original value.

Further chemical analyses were conducted on a sample of freshly shucked, unwashed oysters and on those washed for three minutes, followed by a three-minute period of blowing. It was found that there was no reduction in the copper and phosphorus content due to this treatment. On a dry matter basis, there was a loss of less than 20 percent of the iron and less than 30 percent of the magnesium; about two-thirds of the calcium present in the freshly shucked oysters was leached out. On a fresh basis, however, there will be an apparently greater loss due to the considerable amount of water taken up by the oysters during the washing and blowing processes. Apparently, by far the greatest proportion of the large decrease in ash content resulting from washing and blowing is due to the loss of salt.

In summary, it is to be emphasized that these results are to be expected only under carefully controlled washing and blowing for periods of approximately three minutes for each operation. Reasonable cleaning of the oysters after shucking is necessary for the removal of shell particles, dirt, and other extraneous matter, as well as for reducing the number of bacteria in the product. However, soaking the oysters for unreasonable periods of time will not only result in adulteration with water but will cause excessive losses of proteins and valuable minerals, as well as detract from the delicate flavor which is so characteristic of good oysters.

The oyster is a desirable food not only because of its flavor but also because of its valuable mineral content and the nutritively excellent quality of its protein. Oysters that are produced under proper conditions are indeed a wholesome and nutritious food.

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Coulson, E. J. 1934. The iodine content of oysters. Bur. Fish. Invest. Report No. 18. Washington.

Hunter, Albert C., and Channing W. Harrison. 1928. Bacteriology and chemistry of oysters, with special reference to regulatory control of production, handling and shipment. U. S. Dept. Agric. Tech. Bull. No. 64. March 1928. Washington.

GLOUCESTER SMALL-BOAT FISHERY YIELDS ALMOST FOUR MILLION POUNDS IN 1940

By R. H. Marchant, Assistant Marketing Agent
Division of Fishery Industries

U. S. Fish and Wildlife Service

The catch of fishing boats of under five net tons that land their fish at Gloucester totaled 3,793,000 pounds in 1940. Sales of these fish totaled almost $100,000 to the fishermen.

Trawl lines constituted the most important gear and floating traps were second, these two classifications accounting for almost four-fifths of the total value. Cod, haddock, and mackerel were the most valuable species landed.

GLOUCESTER SMALL BOAT CATCH--1940

Species	Anchor gillnets		Drift gillnets		Handline & Jig		Trawl line		Troll line	
	lbs.	$	lbs.	$	lbs.	$	lbs.	$	lbs.	$
Alewives	--	--	--	--	--	--	--	--	--	--
Butterfish	--	--	--	--	--	--	--	--	--	--
Cod	7,100	339	--	--	162,000	6,104	479,200	21,588	--	--
Cusk	--	--	--	--	800	13	81,600	1,845	--	--
Grey sole	--	--	--	--	--	--	--	--	--	--
Yellowtails	--	--	--	--	--	--	400	6	--	--
Blackbacks	--	--	--	--	--	--	--	--	--	--
Dabs	--	--	--	--	--	--	2,500	43	--	--
Haddock	4,800	214	--	--	200	11	380,100	17,250	--	--
Hake	6,300	187	--	--	--	--	46,800	1,362	--	--
Halibut	--	--	--	--	--	--	200	31	--	--
Herring	--	--	--	--	--	--	--	--	--	--
Mackerel	--	--	82,300	2,354	--	--	--	--	--	--
Pollock	109,600	2,074	--	--	33,500	614	35,900	672	27,200	499
Salmon	--	--	--	--	--	--	--	--	--	--
Shad	300	15	600	9	--	--	--	--	--	--
Sharks	--	--	500	15	--	--	--	--	--	--
Sturgeon	--	--	--	--	--	--	--	--	--	--
Tuna	--	--	100	10	--	--	--	--	47,200	1,700
Whiting, rd.	--	--	12,100	70	--	--	--	--	--	--
Whiting, dr.	--	--	--	--	--	--	--	--	--	--
Wolffish	--	--	--	--	--	--	10,000	343	--	--
Squid	--	--	--	--	--	--	--	--	--	--
Misc.	--	--	--	--	--	--	--	--	--	--
Total	128,100	2,829	95,600	2,458	196,500	6,742	1,036,700	43,140	74,400	2,199

GLOUCESTER SMALL BOAT CATCH--1940 (Continued)

Species	Floating traps		Otter trawl		Harpoon		Totals 1940		Totals 1939	
	lbs.	$	lbs.	$	lbs.	$	lbs.	$	lbs.	$
Alewives	70,900	480	--	--	--	--	70,900	480	18,200	117
Butterfish	271,100	11,860	--	--	--	--	271,100	11,860	45,300	1,573
Cod	8,900	269	4,800	186	--	--	662,000	28,486	622,900	19,942
Cusk	--	--	--	--	--	--	82,400	1,858	36,100	489
Grey sole	--	--	12,400	497	--	--	12,400	497	2,100	130
Yellowtails	--	--	6,200	193	--	--	6,600	199	1,600	33
Blackbacks	--	--	4,000	40	--	--	4,000	40	800	26
Dabs	--	--	14,000	236	--	--	16,500	279	2,600	56
Haddock	--	--	4,900	135	--	--	390,000	17,610	241,800	8,941
Hake	--	--	1,700	34	--	--	54,800	1,583	106,200	1,750
Halibut	--	--	--	--	--	--	200	31	200	21
Herring	180,400	1,585	--	--	--	--	180,400	1,585	8,000	215
Mackerel	767,500	13,685	--	--	--	--	849,800	16,039	913,300	13,793
Pollock	22,100	200	--	--	--	--	228,300	4,059	375,500	5,991
Salmon	100	25	--	--	--	--	100	25	100	15
Shad	2,300	18	--	--	--	--	3,200	42	300	12
Sharks	300	16	--	--	--	--	800	31	5,000	134
Sturgeon	100	6	--	--	--	--	100	6	--	--
Tuna	1,900	87	--	--	98,300	3,416	147,500	5,213	135,800	4,921
Whiting, rd.	584,400	3,531	52,800	327	--	--	649,300	3,928	384,300	2,102
Whiting, dr.	--	--	65,900	824	--	--	65,900	824	--	--
Wolffish	--	--	400	12	--	--	10,400	355	5,100	125
Squid	86,600	1,294	--	--	--	--	86,600	1,294	20,100	296
Misc.	--	--	--	--	--	--	--	--	3,300	120
Total	1,996,600	33,056	167,100	2,484	98,300	3,416	3,793,300	96,324	2,928,600	60,802

Although the line trawler is rapidly disappearing from the offshore grounds, the small boat fishermen of Gloucester still find in trawling their principal means of gaining a livelihood, the 1940 catch by this gear being worth $43,000 to these men. The trap fishery ranks first in catch but second in value, amounting in 1940 to $33,000. This fishery is subject to tremendous fluctuations with the past few years seeing it at one of its lower levels.

NATIONAL NUTRITION CONFERENCE FOR DEFENSE

About nine hundred professional workers in nutrition; physicians; social and welfare workers; and representatives of industry, trade unions, and consumer groups met at the request of the President for a National Nutrition Conference for Defense. This conference was held in Washington on May 26-28 under the chairmanship of Hon. Paul V. McNutt, Administrator, Federal Security Agency, and Coordinator of Health, Welfare and Related Defense Activities. Among those attending were Dr. Harden F. Taylor of Atlantic Coast Fisheries; Dr. E. D. Clark of National Canners Association; and Dr. Hugo Nilson, Fisheries Technological Laboratory, College Park, Md.

The work of the conference was divided into nine sections covering research, education, problems in the distribution and processing of foods, and problems in group food service. The summarized report was necessarily limited to a broad outline of general policy. The various sections, however, made specific recommendations; for example, the section on public health and medical aspects of nutrition recommended fish oil as a source of vitamin D for children since it also augments the intake of vitamin A.

The full proceedings will be published very shortly in book form.

COMMERCE DEPARTMENT STUDIES SOURCES OF FISH LIVERS AND OIL IN LATIN AMERICA

The following information has been published by the Industrial Reference Service of the Bureau of Foreign and Domestic Commerce, a section of the U. S. Department of Commerce:

"The war has curtailed imports of cod and cod-liver oils, which formerly supplied the bulk of our needs in this field. Imports of cod and cod-liver oil declined from 8,832,214 gallons in 1939 to 2,594,796 gallons in 1940; and with European sources of supply removed, current imports from Canada, Newfoundland, Iceland, and Japan are far from sufficient for our needs.

"Japan has been the principal source of our fish-liver imports, supplying 6,292,531 pounds of the 8,443,877 pounds imported in 1940. Imports of shark-liver oil advanced from 9,572 gallons in 1939 to 65,135 gallons in 1940 and 94,685 gallons in the first 3 months of 1941, practically all from Canada. The liver from the soup-fin shark is particularly rich in vitamins.

"Domestic production of vitamin fish-liver oils has increased; and in an endeavor to canvass the possibilities of securing additional sources of supply, a survey has been made of possible sources in Latin American countries. This survey confirms reports that in most Latin American countries there are no fish-liver oil-processing plants, but that a number of these countries have recognized the possibilities of developing the production and exportation of fish livers."

A resume of the results of the survey has been released in the May 1941 issue (No. 41) of Industrial Reference Service. This resume lists existing fishing associations and describes conditions in each of the countries covered by the survey. Names of firms which are either now producing fish livers and their oils, or which would be interested in developing this enterprise may be obtained, for $1 per country, either from the Bureau of Foreign and Domestic Commerce in Washington, or through any of its district offices.

WHOLESALE AND RETAIL PRICES

Wholesale commodity prices continued their upward movement in May. The average all-commodity index of wholesale prices in the United States, determined by the Bureau of Labor Statistics from nearly 900 price series, rose from 83.2 percent of the 1926 average for the week ending May 3 to 85.2 percent for the week ending May 31. This was a rise of 2.4 percent. During this period the foods index rose 1.5 percent to 79.2 percent of the 1926 figure. The all-commodity and foods indices were 9.5 percent and 11.9 percent higher, respectively, than the indices of the week ending June 1, 1940.

Food prices at retail also continued to rise, increasing 1½ percent between April 15 and May 13. The Bureau of Labor Statistics's retail index, derived from reports for 51 cities, was 102.1 percent of the 5-year average 1935-39 on May 13. This compared with an index of 97.0 percent on May 14, 1940.

Red salmon at retail averaged 27.6 cents per 16-ounce can on May 13 and pink salmon was priced at 16.8 cents. These prices were 1.5 percent and 1.8 percent higher than the corresponding April 15 prices and represented rises of 7.8 percent and 7.7 percent, respectively, from the prices of a year previous.

NEW ENGLAND CATCH IN 1939 VALUED AT 19½ MILLION DOLLARS

The commercial catch of fishery products in the New England States during 1939 amounted to 663,865,900 pounds, valued at $19,508,634. This is an increase of 5 percent in the quantity of fish and shellfish produced and an increase of 7 percent in the value of the catch to the fishermen, as compared with the catch and its value in 1938.

With respect to the value of the catch, haddock ranked first; cod, second; lobsters, third; clams, fourth; and rosefish, fifth. The catch in the State of Maine amounted to 116,167,400 pounds, valued at $2,694,703; New Hampshire, 877,200 pounds, valued at $106,056; Massachusetts, 521,096,900 pounds, valued at $14,242,459; Rhode Island, 11,856,500 pounds, valued at $1,002,471; and Connecticut, 13,867,900 pounds, valued at $1,462,945.

The New England fisheries provided employment for 18,712 fishermen, 12,884 persons engaged in wholesale and manufacturing establishments, and 196 employed on transporting craft.

The value of the manufactured fishery products produced by 412 establishments amounted to $26,032,888, as compared with an output valued at $19,967,143, by 421 firms in 1938. Salaries and wages paid to employees of these wholesale establishments during 1939 amounted to $7,367,626.

THREE PORT LANDINGS EXCEED FORTY MILLION POUNDS IN APRIL

In April there were 42,773,000 pounds of fishery products, valued at $1,156,000, landed at the three ports of Boston and Gloucester, Mass., and Portland, Maine, by fishing vessels of five net tons and over. These landings are itemized in Statistical Bulletin No. 1424 of the Fish and Wildlife Service.

The landings included 28,054,000 pounds received at Boston, 11,509,000 pounds at Gloucester, and 3,210,000 pounds at Portland. The total for the three ports represented a gain of 21 percent in volume but a drop of 8 percent in value from the March figures.

Compared with April 1940, at which time most of the large otter trawlers were inactive because of a labor controversy, the 1941 landings showed large increases. Total volume increased 162 percent and the value rose 84 percent. Rosefish, in particular, showed spectacular gains as compared with landings of April of last year. This item gained 522 percent in poundage landed and 718 percent in value. Nine million pounds of rosefish were received in Gloucester alone. Pollock, cod, and haddock increased 334 percent, 279 percent, and 67 percent, respectively.

The landings for the first four months of 1941 totaled 126,692,000 pounds, valued at $4,301,000, considerably in excess of the totals for the corresponding period in 1940, which were 92,547,000 pounds, and a valuation of $3,317,000.

BOSTON FISH PIER LANDINGS CONTINUE TO GAIN IN APRIL

Landings at the Boston Fish Pier since January this year have increased monthly, according to the Boston office of the Fishery Market News Service. Total landings for the first four months of the year were about 94 million pounds, almost 20 million pounds ahead of the same period for 1940 when a labor controversy withheld over 50 large otter trawlers from the fishery from early in March until the latter part of June. The totals for the first third of the year indicate that over 300 million pounds of fish will be taken out at the Pier in 1941. Prices to the fishermen also have averaged lower each month since January.

Landings and Prices of Fishery Products at Boston

Item	April 1941		Change from Mar. 1941		Change from Apr. 1940		Landings 4 months 1941	Landings 4 months 1940
	Landings	Av. price (cwt)	Landings	Av. price	Landings	Av. price		
	Lbs.	$	%	%	%	%	Lbs.	Lbs.
Offshore vessels	26,437,000	2.98	+ 10	-22	+137	-31	85,648,000	68,565,000
Inshore craft	2,213,000	2.98	- 8	-18	+ 3	-20	8,312,000	5,902,000
Total	28,650,000	2.98	+ 8	-22	+115	-31	93,960,000	74,467,000
Leading items:								
Offshore								
Cod, large	4,669,000	2.33	- 16	-29	+299	-41	15,986,000	9,307,000
Cod, market	4,468,000	2.35	+ 67	-34	+670	-40	9,939,000	5,565,000
Haddock, large	9,207,000	3.33	+ 12	-24	+ 51	-24	28,727,000	25,315,000
Haddock, scrod	4,347,000	2.94	- 8	-14	+113	-25	16,436,000	10,640,000
Pollock	1,356,000	2.19	+ 14	-31	+445	-46	5,683,000	5,469,000
Rosefish	1,161,000	2.07	+ 31	-29	+348	+31	4,476,000	6,692,000
Yellowtails	224,000	2.32	+304	-17	+ 60	-12	524,000	334,000
Scallops	212,000	17.71	+413	-28	+624	-30	270,000	91,000
Inshore								
Cod, large	173,000	3.60	+ 3	-14	- 22	-27	564,000	610,000
Cod, market	193,000	3.41	- 34	-15	- 55	-26	957,000	1,001,000
Gray sole	195,000	4.67	+ 38	-20	- 7	-11	611,000	812,000
Haddock, large	155,000	4.75	+ 56	-18	+ 2	-14	425,000	235,000
Rosefish	1,156,000	2.18	- 20	-26	+187	+30	4,450,000	1,211,000

BOSTON FISHERY MARKET NEWS REPORTS REACH WIDE AREA

The recent annual circularization of the mailing list for the Fishery Market News Service report issued daily at Boston brought forth a number of unsolicited comments. As an indication of the usefulness of the reports, the variety of occupations followed by the recipients, and the extent of their geographical distribution, excerpts from a few of the letters and cards follow:

Frozen foods company — New York

"We have received your daily fishery market news reports for some time and they certainly have been of value to us."

Wholesale lobster dealer — Maine

"If through error at any time I do not receive your card please do not stop sending me the reports."

Agent — California

". . . we appreciate the regular reports to us. . . "

Board of commerce — Massachusetts

"We are very much interested in receiving these reports . . . As indicated by this letterhead the Board is a commercial organization which utilizes the reports as a source of information for interested members and other parties."

Oil company — Massachusetts

" . . . we receive your reports and find them very valuable."

Fish and oyster market — Ohio

"I am sure that your fish news report consists of invaluable information and also will mean a great deal to us."

Fishing gear company — Massachusetts

" . . . we have found them to be of great interest and usefulness in our business."

Fish restaurant — Illinois

"Kindly keep our name on your mailing list."

Captain of trap boat — Massachusetts

"I sure enjoy getting your fish reports and I always use them as a guide selling my fish."

Board of public welfare — Massachusetts

"We are desirous of being placed on your mailing list for daily fishing reports.

"This office has constant necessity of reference to the arrivals and sales and there is no authoritative record for such information available to us."

Fish market — Ohio

"We have been in business here for 26 years and this is the only service that the Fisheries Dept. has ever rendered that helped us chart our business. Please continue until we notify you we have quit business."

Dealer — British Columbia

"This service has been of great use to us."

Refrigerating company — Minnesota

"We want the reports."

Fulton Market dealer — New York

"Let them come along please."

Marketing representative — Canada

"They are very highly appreciated."

Fish oil company — Massachusetts

"We wish to continue receiving Market News."

Fish and Oyster Co. Georgia

"Please send reports."

Broker Florida

"We are interested in receiving this."

Boston Fish Pier dealer Massachusetts

"Kindly keep our name on your mailing list."

Seafood market Virginia

"Please continue to send."

Dealer Massachusetts

"The reports are of value to us and we enjoy them."

Library California

"Please retain on list."

Dealer Iowa

"Please continue mailing reports."

Broker California

"Please continue to send daily fish market reports."

Soldier Massachusetts

"The reports have been a great help to me, but am in the army now so won't need them for a year anyway.

FISHERMEN OF MIDDLE ATLANTIC STATES CATCH 280 MILLION POUNDS OF FISH AND SHELLFISH IN 1939

Statistical Bulletin No. 1422 shows that the catch of fish and shellfish in the Middle Atlantic States during 1939 amounted to 280,052,500 pounds, valued at $7,387,190. As compared with the catch in 1938, this is an increase of 29 percent in the volume of fishery products taken, but a 10 percent decrease in the value. An increase of about 50,000,000 pounds in the catch of menhaden, a very low-priced species, is primarily responsible for the increase in the quantity of the catch.

Based on the value of the catch, oysters were far ahead of any other individual fishery item in importance.

The fisheries of New York yielded 93,803,400 pounds of fish and shellfish valued at $4,269,016; those of New Jersey, 125,344,600 pounds, valued at $2,698,790; those of Pennsylvania, 14,500 pounds, valued at $2,201; and those of Delaware, 60,890,000 pounds, valued at $417,183.

During 1939, direct employment in the fisheries was furnished to 7,740 fishermen, 5,693 persons in wholesale and manufacturing establishments; and 151 persons on transporting craft. Salaries and wages paid to persons employed in 378 fishery wholesale firms in that area amounted to $6,835,641, as compared with $7,413,363 paid to employees in 383 firms in 1938.

The value of manufactured fishery products produced by these concerns in 1939 amounted to $16,367,706.

ALMOST FIFTY THOUSAND PERSONS FIND LIVELIHOOD IN SOUTH ATLANTIC AND GULF FISHERIES IN 1939

In 1939, there were 627,917,200 pounds of fishery products, valued at $13,904,537, taken commercially in the South Atlantic and Gulf States. This is an increase of 1 percent in quantity and 6 percent in value as compared with the catch and value during the previous year. Shellfish were by far the most important products landed when considered with respect to their value. In 1939, the shellfish production was valued at $8,082,605 to the fishermen, while the fish products amounted to $5,821,932. The catch of shrimp, amounting to 148,069,600 pounds, valued at $4,847,306, ranked foremost in importance.

Considering the value of the fisheries of that section by States, the fisheries of Florida were first in importance, and those of Louisiana, second.

There were, in 1939, 30,136 fishermen engaged in the commercial fisheries of the South Atlantic and Gulf States. In addition, there were 897 persons employed on transporting craft, and 18,420 persons employed in fishery wholesale and manufacturing establishments. There were 773 of these concerns in 1939 as compared with 742 in 1938. The value of the products manufactured by the fishery wholesale firms in 1939 amounted to $13,996,722 as compared with an output valued at $11,762,783 during the previous year.

GULF SHRIMP PRODUCTION BELOW NORMAL

According to information furnished the Fishery Market News Service in New Orleans, La., the production of shrimp in the Gulf States in April continued below normal. Nearly three times as much shrimp was landed as during the preceding month, but it was only 31 percent of the amount landed during April 1940. Production in the first four months of the year was slightly less than that of the first four months of 1940.

The production of hard crabs continued its seasonal increase, being 6 percent higher than the preceding month and 7 percent higher than the same month last year.

The landings of salt-water fish in April were generally higher than those of March 1941 or April 1940. The largest increases were listed for mullet, king whiting, and red snapper.

The catch of fresh-water fish in the various areas reporting was higher than during the preceding month but far less than that of the previous April.

CHICAGO RECEIPTS DROP ONE-FIFTH IN APRIL

Seasonal fluctuations of fishery receipts in Chicago caused considerable change in these arrivals in April as compared with those of March. The usual seasonal decline of oyster trade and anticipation of new supplies of halibut and salmon had pronounced effects on receipts of these items. Sauger receipts almost ceased. Freight shipments dropped sharply and imported items suffered reductions.

The receipts for April, as recorded by the Chicago office of the Fishery Market News Service, included 78 items, of which 28 were fresh-water fish, 34 were salt-water fish, and 16 were shellfish and miscellaneous items.

Although total April receipts were 21 percent less than those of March, they were slightly in excess of those of April 1940, and the total for the first four months of 1941 was 18 percent larger than that for the January to April 1940 total.

Receipts of Fishery Products at Chicago

Item	April 1941	Apr. 1941 compared with Mar. 1941	Apr. 1941 compared with Apr. 1940	4 months Jan. - Apr. 1941	4 mo. 1941 compared with 4 mo. 1940
Classification:	Pounds	Percent	Percent	Pounds	Percent
Fresh-water fish	3,411,000	- 2	+ 16	13,951,000	+ 24
Salt-water fish	1,198,000	- 47	+ 6	6,095,000	+ 23
Shellfish, etc.	298,000	- 41	- 59	2,466,000	- 15
Total receipts	4,907,000	- 21	+ 2	22,512,000	+ 18
Leading items*					
Buffalofish	239,000	- 7	+112	744,000	+195
Carp	222,000	0	+ 1	760,000	+ 21
Lake herring	277,000	+ 47	+ 50	1,006,000	+ 8
Lake trout	647,000	+ 46	+ 33	1,801,000	+ 26
Sauger	100,000	- 91	- 51	3,255,000	+ 40
Smelt	652,000	+ 61	- 16	1,427,000	- 8
Whitefish	214,000	- 4	+ 57	1,419,000	- 12
Yellow perch	324,000	+ 95	+ 70	1,140,000	+ 56
Yellow pike	241,000	+ 67	- 7	803,000	+ 39
Halibut	415,000	- 52	- 30	2,563,000	+ 9
Rosefish fillets	305,000	- 4	+ 27	1,049,000	- 17
Salmon	152,000	- 67	+322	831,000	+192
Shrimp	121,000	+218	- 77	986,000	- 29
Leading sources:					
Wisconsin	1,143,000	+ 27	- 2	3,181,000	+ 6
Michigan	886,000	+141	+ 8	1,928,000	+ 4
British Columbia	533,000	- 50	- 1	2,607,000	+ 16
Massachusetts	511,000	- 25	+ 63	2,088,000	+ 11
Domestic total	4,014,000	+ 13	+ 3	13,813,000	+ 14
Imported total	893,000	- 67	0	8,699,000	+ 23
Transported by:					
Truck	2,486,000	+ 8	+ 19	8,512,000	+ 31
Express	1,703,000	+ 91	+ 9	4,134,000	- 14
Freight	718,000	- 77	- 37	9,866,000	+ 26

* Includes fresh and frozen fish.

CALIFORNIA FISH COMMISSION ISSUES 1941-42 PILCHARD FISHING REGULATIONS

The Division of Fish and Game of the California Department of Natural Resources has released information on the restrictions which will be placed on the fishing for pilchards for reduction purposes off California in the 1941-42 season. In a meeting on April 25 the Commission agreed that not to exceed 332,500 tons of pilchards will be permitted to be taken and used for these purposes.

Permits in the amount of 4750 tons will be issued only to those plants that held permits during the season just finished. The sardine fishing season in the northern districts opens August 1.

The Service had been informed in mid-April by its Seattle Market News office that an agreement had been reached between pilchard plant and cannery operators and fishing boat owners associations covering the price to be paid fishermen for pilchards in the San Francisco Bay area during the 1941-42 season. The agreed price was $12.50 per ton, an increase of $2.00 per ton over the 1940-41 price.

PACIFIC HALIBUT SEASON CLOSED JUNE 30 IN AREAS 1 AND 2

About the middle of June the International Fisheries Commission announced the closing of the halibut fishery in Areas 1 and 2 to all halibut fishing at midnight, June 30, except for halibut taken incidentally in the handline fishery for "lingcod", rockfishes, and sablefish. It had been determined that the local quota limit of 22,700,000 pounds would be taken by that date. A year ago the halibut season in Areas 1 and 2 was closed on July 13, which makes the seasons in this fishery for 1941 and 1940 the shortest in the history of the halibut fishery.

100 FISH COOPERATIVES IN MARITIME PROVINCES, MAGDALEN ISLANDS

The following article appeared in the April Fisheries News Bulletin, published by the Department of Fisheries at Ottawa, Canada:

"Co-operative ideas have made a good deal of progress among the fishermen of the Maritime Provinces and the Magdalen Islands in the past few years and approximately 100 of the fishermen's associations in those areas now carry on co-operative activities of one kind or another. That, indeed, is only another way of saying that most of the associations which the fishermen have organized in that part of the world engage in co-operative undertakings. There are about 30 fishermen's co-operative groups in Nova Scotia, about the same number in Prince Edward Island and between 30 and 40 in New Brunswick. In the Magdalens, where the number of fishermen is much smaller than in any of the Maritime Provinces, there are four or five co-operatives.

"In a good many cases the co-operatives market live lobsters, in others they carry on lobster canning, some market smelts, two or three fresh salmon; still others, manufacture pickle-cured cod or boneless cod, while there are one or two instances in which associations handle miscellaneous products such as salt mackerel fillets and canned quahaugs (or hard shell clams). In most cases, of course, the associations also buy supplies for their members co-operatively and a number of them have 'credit union' organization for meeting the members' credit needs.

FACILITIES FOR COOPERATIVE STUDY GROUPS PLANNED FOR BRITISH COLUMBIA FISHERMEN

The Commercial Fisherman's Weekly reports that a plan has been initiated for a special educational program for British Columbia fishermen to lead to the organization of groups to study cooperative organization. Where desired, this program will lead to the organization of cooperatives and credit unions. The plan has been arranged by the University of British Columbia assisted financially by the Dominion of Canada fisheries department.

The aim of the program is to help fishermen gain a clearer understanding of their problems and effective methods of solving them. Three agents appointed by early January were assigned to assist study groups formed last year and organize other groups. These agents work in three main districts--Prince Rupert and the Queen Charlotte Islands; Vancouver Island and Johnstone Straits; and the Lower Mainland and Gulf area.

REPORT ON CANADIAN SALT FISH TRADE IS ISSUED

A bulletin entitled The Competition of the Canadian and Newfoundland Fisheries, by Stewart Bates, was recently issued by the Salt Fish Board of the Canadian Department of Fisheries, Halifax, Nova Scotia. This publication describes salt fish commerce in particular. The bulletin is summarized as follows:

Canadian and Newfoundland trade in salt fish has been on the downward trend over the last twenty years, but the Canadian decline has been greater relatively than that for Newfoundland. After the World War the return of Norway as a producer, supplemented by Iceland's

large contributions to the salt fish trade and by increases in the United Kingdom and French exports, created considerable competition.

Several of the markets for salt fish were outside the blocs, empire preference schemes, and monetary areas in which Newfoundland and Canada were included. Moreover, the countries in which the salt fish were marketed were attempting to become economically self sufficient. Salt fish production is not susceptible to or at least has not attained any high degree of mechanization or centralization. While prices of salt fish must be low enough to meet the situation in areas of very low relative standards of living, such as Puerto Rico and Italy, the goods used by the fishermen are produced in countries with a high standard of living and consequently at high cost.

The result has been that although Newfoundland has retained a greater amount of the salt fish trade, it has done so largely because its fishermen have had no other occupation to turn to but were forced in a greater degree than the Canadians to degrade their standard of living in order to retain their markets.

CANADIAN FISHERIES STATION GIVES TRAINING TO LOBSTER CANNERY FOREMEN

Note No. 72 from the Atlantic Fisheries Experimental Station at Halifax, N. S., as published in Progress Reports No. 29 of the Fisheries Research Board of Canada reports that this station held a series of three short courses for lobster canning foremen during February and March.

The note states that the courses, of six days' duration each, were arranged primarily for the discussion and demonstration of lobster canning and consisted of a number of lectures and discussions on the theory and practice of canning of fishery products, and practical work in the Station's Experimental Cannery on the canning of lobster, mackerel fillets, and "Chicken haddies."

Particular emphasis was put on proper methods of arranging the lobster meat in the cans, proper weighing procedure, exhausting, can sealing, maintenance and adjustment of can-closing machines, proper processing and retort operation. The inter-relations between methods of lobster canning, quality of pack, inspection and grading of canned lobster, and marketing of graded products were fully discussed.

NEWFOUNDLAND COD FISHERY SHOWS EFFECT OF WAR

A report describing conditions in the Newfoundland cod fishery for 1940 has been furnished the State Department by the American Consul General at St. John's, Newfoundland. This report, quoting figures issued by the Newfoundland Fisheries Board, shows that only 22,792 fishermen were active in 1940 in the cod fishery, compared with 25,220 in 1939. This was a drop of 10 percent, said to be due directly to requirements of the armed forces for manpower.

Stocks of codfish held on February 1, 1941, totaled only 18,127,000 pounds, compared with a total of 52,500,000 pounds on hand on January 31, 1940.

The Newfoundland deep sea fisheries in 1940 employed 159 vessels and 1,705 fishermen, and yielded 22,420,000 pounds of fish.

The report also stated that all Newfoundland supplies of cod-liver oil have been exhausted, and that new stocks are not expected to come on the market until summer.

FROZEN FISH TRADE

United States Holdings of Frozen Fish Increase

In the month ending May 15 the stocks of frozen fishery products in the cold-storage plants of the United States and Alaska were enlarged by 16 percent. Large decreases in stocks of salmon, pollock, sablefish, and whitefish were offset by additions to quantities of halibut, rosefish, haddock, and sea herring.

Holdings of Fishery Products in the United States 1/

Item	May 15 1941	May 15 compared with Apr. 15 1941	May 15 1940	5-yr. av. May 15	Apr. 15 1941	May 15 1940	5-yr. av. May 15
	Pounds	Percent	Percent	Percent	Pounds	Pounds	Pounds
Frozen fish and shellfish:							
Total holdings	41,435,000	+ 16	+ 23	+ 9	35,757,000	33,756,000	37,976,000
Important items:							
Fillets							
Cod	1,741,000	+ 45	+215	(2)	1,201,000	552,000	(2)
Haddock	3,219,000	+ 41	+ 87	-10	2,279,000	1,724,000	3,586,000
Pollock	1,407,000	- 27	+ 61	(2)	1,926,000	873,000	(2)
Rosefish	2,591,000	+113	+402	(2)	1,215,000	516,000	(2)
Halibut	4,493,000	+ 85	+ 25	+17	2,430,000	3,583,000	3,852,000
Sea herring	1,924,000	+ 95	+ 18	+27	988,000	1,633,000	1,510,000
Mackerel	874,000	0	- 40	-45	877,000	1,445,000	1,584,000
Sablefish	816,000	- 33	- 29	+27	1,208,000	1,145,000	643,000
Salmon	2,379,000	- 30	+ 36	+ 1	3,415,000	1,749,000	2,355,000
Smelts	2,046,000	+ 17	+ 31	+53	1,746,000	1,567,000	1,339,000
Whiting	1,190,000	- 2	- 17	-49	1,208,000	1,430,000	2,332,000
Whitefish	1,189,000	- 18	- 22	+ 5	1,440,000	1,523,000	1,129,000
Shrimp	1,395,000	- 6	- 33	(2)	1,479,000	2,091,000	(2)
Cured fish:							
Herring, cured	19,798,000	+ 20	- 13	+ 1	16,464,000	22,817,000	19,571,000
Salmon, mild-cured	1,617,000	- 31	- 66	-51	2,339,000	4,736,000	3,272,000

1/ Statistics furnished by the Agricultural Marketing Service, Department of Agriculture.
2/ Data not available.

Freezing activity in the month ending May 15 was greatly accelerated over that of the previous month, showing an increase of 116 percent. Rosefish fillets, halibut, and haddock fillets were frozen in greatest quantity.

Freezings of Fishery Products in United States Cold-storage Plants 1/
(Figures are for the month ending on the date indicated)

Item	May 15 1941	May 15 compared with Apr. 15 1941	May 15 1940	5-yr. av. May 15	Apr. 15 1941	May 15 1940	5-yr. av. May 15
	Pounds	Percent	Percent	Percent	Pounds	Pounds	Pounds
Total fish and shellfish	18,502,000	+ 116	+ 57	+27	8,568,000	11,772,000	14,547,000
Important items:							
Croakers	686,000	+2883	+553	+45	23,000	105,000	474,000
Haddock fillets	2,326,000	+ 36	+ 29	+ 9	1,708,000	1,802,000	2,141,000
Rosefish fillets	3,654,000	+ 39	+614	(2)	2,635,000	512,000	(2)
Halibut	2,805,000	+ 732	+ 1	+16	337,000	2,775,000	2,408,000
Sea herring	1,094,000	+ 362	+ 99	+50	237,000	550,000	727,000
Smelts	594,000	+ 191	+ 14	+32	204,000	522,000	450,000
Shrimp	862,000	+ 127	- 43	(2)	379,000	1,517,000	(2)

1/ Statistics furnished by the Agricultural Marketing Service, Department of Agriculture.
2/ Data not available.

Cod and Haddock Fillet Stocks Enlarged as Boston Holdings Increase

Boston cold-storage plants on the last Wednesday in May held much larger frozen fish stocks than were held four weeks earlier and on the corresponding date in 1940, according to the Boston Fishery Market News Service office. Supplies of cod and haddock fillets, which had shown large increases during April, continued to grow in May, and on May 28 composed nearly half of the entire holdings. Mackerel stocks also made notable increases.

Boston Cold-storage Holdings

Item	May 28, 1941	May 28 compared with		Apr. 30, 1941	May 29, 1940
		Apr. 30, 1941	May 29, 1940		
	Pounds	Percent	Percent	Pounds	Pounds
Total fish and shellfish	8,275,000	+ 32	+ 145	6,267,000	3,381,000
Leading items:					
Fillets:					
Cod	1,191,000	+ 77	+1352	672,000	82,000
Haddock	2,555,000	+ 48	+ 308	1,727,000	626,000
Pollock	560,000	- 44	+ 57	992,000	357,000
Rosefish	239,000	+ 45	+ 246	165,000	69,000
Sea herring	264,000	+ 96	+ 147	135,000	107,000
Mackerel	743,000	+259	+ 163	207,000	283,000
Smelt	775,000	- 12	+ 35	878,000	575,000
Whiting, dressed	92,000	+217	+ 59	29,000	58,000
Scallops	250,000	+410	+ 33	49,000	188,000
Shrimp	23,000	- 15	+ 35	27,000	17,000
Squid	150,000	+582	- 6	22,000	159,000

New York Stocks of Mackerel Rise while King Salmon and Whitefish Holdings Decline

The most notable changes during the five weeks ending the last Thursday in May in the stocks of frozen fishery products in cold-storage plants in New York were recorded for mackerel, king salmon, whitefish, and spiny lobster tails. Mackerel stocks were increased by almost 500 percent as the other three items showed large withdrawals from storage. The holdings of other fishery products showed relatively little change for the five-week period.

New York Cold-storage Holdings

Item	May 29, 1941	May 29 compared with		Apr. 24, 1941	May 29, 1940
		Apr. 24, 1941	May 29, 1940		
	Pounds	Percent	Percent	Pounds	Pounds
Total fish and shellfish	4,904,000	+ 8	+ 5	4,560,000	4,687,000
Leading items:					
Butterfish	186,000	- 14	- 32	215,000	272,000
Halibut	210,000	+ 17	+500	179,000	35,000
Herring, sea and sardine	163,000	- 7	+143	176,000	67,000
Mackerel	241,000	+488	+ 6	41,000	228,000
King salmon	279,000	- 37	+ 64	445,000	170,000
Shad	227,000	+ 12	- 24	203,000	299,000
Smelt	288,000	- 4	+101	301,000	143,000
Sturgeon	405,000	0	- 35	405,000	622,000
Whitefish	454,000	- 38	- 21	737,000	574,000
Lobster tails, spiny	85,000	- 58	- 72	201,000	305,000
Shrimp	62,000	+ 2	- 50	61,000	123,000

Chicago Holdings Decrease One-sixth in May

In the five weeks ending May 28 the holdings of frozen fishery products in Chicago dropped 16 percent, from 4,138,000 pounds to 3,485,000 pounds. Stocks of blue pike and sauger, lake herring and chubs, whitefish, and halibut showed the largest withdrawals.

Chicago Cold-storage Holdings

Item	May 28, 1941	May 28 compared with		Apr. 24, 1941	May 29, 1940
		Apr. 24, 1941	May 29, 1940		
	Pounds	Percent	Percent	Pounds	Pounds
Total fish and shellfish	3,485,000	-16	0	4,138,000	3,491,000
Leading items:					
Blue pike and sauger	217,000	-64	- 60	596,000	546,000
Lake herring and chubs	315,000	-27	- 96	433,000	161,000
Lake trout	161,000	- 5	- 20	154,000	202,000
Smelt	299,000	+37	+ 11	218,000	269,000
Tullibee	160,000	+10	+452	178,000	29,000
Whitefish	284,000	-16	- 12	336,000	322,000
Yellow pike	126,000	- 8	+180	137,000	45,000
Cod fillets	116,000	+ 3	+ 15	113,000	101,000
Haddock fillets	105,000	+12	+176	94,000	38,000
Rosefish fillets	86,000	-21	+161	109,000	33,000
Halibut	319,000	-25	+110	423,000	152,000
Shrimp	202,000	+77	- 50	114,000	400,000
Lobster tails, spiny	93,000	-13	+111	107,000	44,000

Canadian Plants Hold 18½ Million Pounds of Frozen Fishery Products on June 1

Cold-storage plants in Canada held 18,574,000 pounds of fishery products on June 1, according to preliminary figures released by the Dominion Bureau of Statistics. This included 16,022,000 pounds of frozen fresh items and 2,552,000 pounds frozen smoked. The holdings of fresh frozen stocks were 9 percent smaller than on May 1 but 8 percent larger than those of June 1, 1940. The fresh fish stocks included mainly halibut, sea herring, salmon, cod fillets, pickerel, tullibees, and whitefish, while the most important smoked items were groundfish fillets, finnan haddie, and sea herring kippers. Major decreases in holdings during May occurred in fresh cod fillets and sea herring, while a large increase was recorded in halibut supply.

Stocks frozen during May included 4,237,000 pounds of fresh items and 728,000 pounds of smoked fish. Fresh halibut, cod fillets, and sea herring, and smoked groundfish fillets were the main items frozen. Of these items, 1,734,000 pounds, 1,033,000 pounds, 493,000 pounds, and 685,000 pounds were frozen, respectively. Total freezing activity was 13 percent less than that of April and 18 percent below that of May 1940. Major decreases from April occurred in the freezing of both fresh and smoked groundfish fillets. Freezing of fresh halibut increased from 963,000 pounds in April.

CANNED FISH TRADE

Canned Salmon Stocks Reduced to One-eighth those of Year ago

Producers held only 136,000 cases of canned salmon on May 31, according to figures compiled by the Association of Pacific Fisheries. This was 58 percent of the April 30 total and only 12 percent of the size of the May 31, 1940, stock.

Canned Salmon Unsold--Standard Cases

Item	May 31, 1941	April 30, 1941	May 31, 1940
Chinook	36,000	42,000	19,000
Puget Sound sockeye	4,000	20,000	26,000
Alaska red	32,000	47,000	849,000
Silver or coho	22,000	31,000	56,000
Humpback or pink	34,000	69,000	108,000
Chum	5,000	20,000	62,000
Bluebacks and steelheads	3,000	4,000	1,000
Total	136,000	233,000	1,121,000

The above figures are based on reports covering 99 percent of the 1939 and 1940 packs.

1940-41 Shrimp Pack Continues to Trail Pack of Previous Season

To May 31, the 1940-41 pack of shrimp trailed by almost 200,000 cases the pack of the previous season. With only 5,000 cases packed during May, the total for the first eleven months of the present season reached 915,000 standard cases, compared with 1,097,000 cases packed for the corresponding part of the 1939-40 season.

These totals, representing standard cases of 48 No. 1 cans, cover the operations of the 40 plants included under the Seafood Inspection Service of the U. S. Food and Drug Administration.

Prices of canned shrimp for plain No. 1 tall tins, f.o.b. point of production, were reported by Gulf Coast packers as follows to the Fishery Market News Service.

Canned Shrimp Prices--Per Dozen Tins

	Wet Pack		Dry Pack	
	June 1, 1941	June 1, 1940	June 1, 1941	June 1, 1940
Small	$1.20 - $1.35	$1.10 - $1.15	$1.20 - $1.35	$1.10 - $1.15
Medium	1.25 - 11.50	1.15 - 1.20	1.25 - 1.50	1.15 - 1.20
Large	(1)	1.20 - 1.25	(1)	1.20 - 1.25
Extra large or jumbo	(1)	1.25 - 1.30	(1)	1.25 - 1.30

1/ Because supplies of large and extra large shrimp were low, many packers were not quoting prices on these grades. A few large shrimp were selling as high as $1.85 per dozen tins and a few extra large were quoted as high as $2.00 per dozen.

California Plants Can 152,000 Cases of Tuna in April

A report from the California Division of Fish and Game shows that 492,000 standard cases of tuna were canned in that State in the first four months of 1940. This was considerably behind the January to April 1939 figure of 747,000 cases. During April 152,000 cases were packed.

Of the four-months total for 1941, 340,000 cases were yellowfin tuna; 75,000 cases, striped tuna; 52,000 cases, tuna flakes; and 21,000 cases, tonno style tuna, bonito, yellowtail, and albacore. The San Diego district produced 378,000 cases and the San Pedro district, 114,000 cases.

California plants produced no canned mackerel or pilchards during April.

British Columbia Packs 644,000 Cases of Herring

A report issued by the Chief Supervisor of Fisheries at Vancouver, B. C., showed that to March 15 the 1940-41 fishery for herring in the Province produced 644,000 cases of canned herring. In addition, the fishery yielded 600 tons of herring fresh, smoked, and otherwise handled for immediate consumption; 5,200 tons dry salted; 1,800 tons for bait; 300 tons for export; and 700 tons mild-cured. There were 10,800 tons of herring meal and 1,006,000 gallons of herring oil produced. The report stated that green tons of herring landed in the fishery totaled 89,947 tons.

FOREIGN FISHERY TRADE

Canned Salmon Exports Continue below Normal

Exports of edible fishery products during April were less than half as large as those during the same month in 1940. Reduced shipments of canned salmon accounted for the major portion of the decline. In the four months ending with April, shipments of canned sardines from the United States to foreign countries were 52 percent less than those in the same period of 1940, while canned salmon and canned shrimp show declines of 18 percent and 58 percent, respectively.

United States Exports of Edible Fishery Products 1/

Item	April 1941	April 1940	Four months ending with April 1941	Four months ending with April 1940
	Pounds	Pounds	Pounds	Pounds
Salmon, canned	560,810	5,370,449	13,067,719	15,909,147
Sardines, canned	3,963,255	5,721,468	18,117,161	37,359,818
Shrimp, canned	23,103	154,558	375,594	889,838
Other products	1,259,711	760,966	6,285,869	5,534,199
Total	5,806,879	12,007,441	37,846,343	59,693,002

1/ Data furnished by Bureau of Foreign and Domestic Commerce.

Sea Herring Imports Show Marked Increase

Sea herring led all other items in imports of edible fishery products into the United States during April, accounting for 34 percent of the total. Other leading items received during the month were fresh-water fish, which accounted for 12 percent of the total; salted groundfish, 11 percent; fresh or frozen lobsters, 7 percent; and canned sardines, 4 percent. Total receipts of edible fishery products during the four months ending with April were 14 percent less than those in the same period in 1940.

Imports of Edible Fishery Products into the United States

Item	April 1941	April 1940	Four months ending with April 1941	Four months ending with April 1940
Fresh or frozen:	Pounds	Pounds	Pounds	Pounds
Fresh-water fish	2,531,461	2,945,080	22,421,381	21,978,247
Halibut	724,054	773,607	2,144,292	1,970,455
Salmon	585,505	335,147	1,812,290	909,154
Sea herring	7,158,340	382,500	10,047,199	1,607,224
Swordfish and sturgeon	24,473	106,072	144,975	587,876
Tuna	290,627	396,068	877,267	1,300,091
Fish filleted, skinned, boned, etc.	770,482	1,780,076	4,181,222	5,580,219
Smelts	2,660	1,630	4,434,037	4,095,861
Lobsters	1,425,748	1,418,751	5,114,464	4,218,235

Imports of Edible Fishery Products into the United States (Continued)

Item	April 1941	April 1940	Four months ending with April 1941	Four months ending with April 1940
Pickled or salted:	Pounds	Pounds	Pounds	Pounds
Cod, haddock, hake, etc.	2,369,965	4,706,486	12,302,304	15,182,131
Herring	487,784	2,682,929	11,959,133	16,570,432
Canned:				
Crabmeat	440,519	130,625	1,129,747	9,068,216
Lobsters	41,549	30,593	440,797	260,318
Sardines	892,157	1,450,396	3,338,913	5,571,380
Tuna	242,157	315,958	990,873	3,754,812
Other, fresh, frozen, salted, canned, etc.	3,264,436	4,832,191	15,516,948	20,276,475
Total	21,251,917	22,288,109	96,855,842	112,931,126

Demand for Canned Salmon in Scotland Exceeds Supply

A report covering Scotland's import trade for 1940 in the Commercial Intelligence Journal for April 26 states: "The demand for canned salmon, owing to the shortage of fresh and canned meats and the high prices of fresh fish, is greater than the supply." Consumers have been making heavy purchases of canned salmon and it is said to be doubtful whether much, if any, of the 1940 pack remains in the stores, despite recommendation of the importers that retailers spread out these stocks until the arrival of the 1941 pack.

THE COVER PAGE

The Pacific Coast halibut season is now in full swing. This fishery, regulated by the International Fisheries Commission, began operations for 1941 on April 1. Landings for April totaled 7,237,000 pounds, which brought fishermen prices averaging about 10.18 cents per pound at Seattle. Total catch in 1940 was 52,006,000 pounds.

Halibut fishing operations are carried on mainly in the open waters of the Gulf of Alaska from specially constructed "halibut" vessels fishing baited "trawl" lines. The photograph on the cover pictures a vessel engaged in halibut fishing. The crew is in the process of hauling a halibut aboard.

MARKET INFORMATION ON FISH SUPPLIED TO OFFICE OF PRICE ADMINISTRATION AND CIVILIAN SUPPLY

The following material was submitted by the Fish and Wildlife Service to the Consumers Division of the Office of Price Administration and Civilian Supply for their publication Consumer Prices:

Fresh and Frozen Fish and Shellfish

By including fish and other seafoods on their menus, housewives often have an opportunity to effect substantial savings in their food budgets. Supplies and prices of most seafoods vary during the year, but at any given season many species are available at attractive prices. Like fresh vegetables and fruits, many species of fish have their seasons, and at such periods of abundance they offer opportunities for savings which should not be overlooked.

Because of heavy landings of fish on the New England coast at the present time, the following species are likely to be attractively priced: Haddock, cod, rosefish (ocean perch), whiting, Boston mackerel, hake, and scup (porgies). While these species are available in most all sections of the country, the bulk of the catch is distributed in New England, the Middle Atlantic States, most of the Middle Western States, and in some Southern States. Hard crabs, soft crabs, and crabmeat from the Chesapeake Bay and the South Atlantic and Gulf States are now in season and liberal quantities are available. Lobsters from New England and the Maritime Provinces of Canada and Newfoundland are also in season.

Many fresh-water species from the Great Lakes are now seasonally abundant. In all areas supplied by these fisheries, and especially in North Central and Middle Western States, consumers will find it worthwhile to watch local markets for such species as yellow perch, lake herring, whitefish, and blue pike, although supplies of this latter species may drop off in July. Consumers in areas supplied with buffalofish and catfish should watch for low prices on these species.

Current fishing operations on the Pacific Coast are providing large supplies of salmon and halibut which are distributed over most of the United States. Advantageous prices are likely to prevail on these species as increasing supplies are available. On the Pacific Coast, besides salmon and halibut, such species as lingcod, flounder, and sole will be coming on the market in increasing quantities.

In the Southern States, especially those actually bordering on the South Atlantic and Gulf seaboard, hard and soft crabs and crabmeat are seasonally abundant. Likewise, mullet, grouper, and red snapper should be "good buys" in these areas. Many local species, such as blue runner and salt-water bream will bear watching. In this connection, it should be brought out that in addition to the better known species there are many lesser known varieties of fish which come on local markets in large quantities and offer opportunities for savings.

Canned Fish

Stocks of canned salmon have become further depleted during the past month, and practically no new supplies from current canning operations are expected until later in the summer. This situation has been reflected by some increases in the retail price of this item. A steady market and firm, perhaps rising, prices on canned salmon are expected until supplies from current operations are available.

●

The production of canned tuna during the first four months of 1941 is substantially below that for the corresponding period of last year. The canning of California sardines (pilchards) has not yet begun, and the production of canned mackerel in large quantities is not expected until later on in the summer. Heavy production of Maine sardines is reported, but imports of sardines continue to be low. The production of canned shrimp during the 1940-41 season is still lagging behind that of the 1939-40 season.

Consumer Broadcasts on Fish

Good buys of fish and shellfish are broadcast by over one hundred radio stations twice weekly. This information is usually in the form of spot announcements made between programs. From most of these stations material on fish is given four times weekly, but the good buys, usually citing two species that are plentiful and reasonable in price, are ordinarily given twice a week. This material is provided by the United States Fish and Wildlife Service from offices in Boston, New York, Pittsburgh, Columbus, Cincinnati, Chicago, Jacksonville, New Orleans, and Seattle. The information from offices in Columbus and Cincinnati is broadcast only from those cities, but the remaining offices supply local stations and others in nearby communities. Consult your local broadcasting station or newspaper in order to find out if and when this information for consumers is put on the air in your locality.

FISHERY TRADE INDICATORS
(Expressed in Thousands of Pounds)

Item	Month	Latest month	Same month a year ago	Previous month
FRESH FISH LANDINGS				
Boston, Mass.	April	28,054	12,392	26,401
Gloucester, Mass.	do	11,509	2,860	7,335
Portland, Maine	do	3,210	1,061	1,692
Boston, Gloucester, and Portland:				
Cod	do	11,027	2,907	9,022
Haddock	do	15,331	9,182	13,865
Pollock	do	1,539	355	1,224
Rosefish	do	12,527	2,014	9,573
Pacific Coast:				
Halibut, North Pacific ports	do	7,237	7,733	--
Halibut, Seattle	do	2,613	2,931	--
FISH RECEIPTS, CHICAGO 1/				
Salt-water fish	do	1,198	1,127	2,273
Fresh-water fish	do	3,411	2,946	3,467
Shellfish, etc.	do	298	723	501
By truck	do	2,487	2,084	2,303
By express	do	1,703	1,569	892
By freight	do	718	1,142	3,047
COLD-STORAGE HOLDINGS 2/				
New York, N. Y.:				
Salt-water fish	May	3,125	2,352	2,533
Fresh-water fish	do	1,376	1,696	1,657
Shellfish, etc.	do	403	539	371
Boston, Mass.:				
Salt-water fish	do	7,819	2,986	6,135
Fresh-water fish	do	13	12	17
Shellfish, etc.	do	443	383	115
Chicago, Ill.:				
Salt-water fish	do	1,205	785	1,494
Fresh-water fish	do	1,708	1,771	2,183
Shellfish, etc.	do	365	527	315
Unclassified	do	207	408	142
United States:				
Cod fillets	do	1,741	552	1,201
Haddock fillets	do	3,219	1,724	2,279
Halibut	do	4,493	3,583	2,430
Mackerel	do	574	1,445	877
Pollock fillets	do	1,407	873	1,986
Rosefish fillets	do	2,591	516	1,215
Salmon	do	2,379	1,749	3,415
Whiting	do	1,190	1,430	1,208
Shrimp	do	1,395	2,091	1,479
New England, all species	do	9,937	5,786	8,110
Middle Atlantic, all species	do	8,698	7,991	7,477
South Atlantic, all species	do	2,935	1,447	1,710
North Central East, all species	do	7,752	7,540	8,514
North Central West, all species	do	1,744	1,748	2,033
South Central, all species	do	1,755	857	1,295
Pacific, all species	do	8,613	8,387	6,429
FOREIGN FISHERY TRADE 3/				
Exports:				
All edible fishery commodities	April	5,807	12,007	4,941
Canned salmon	do	581	5,370	542
Canned sardines	do	3,963	5,721	3,060
Canned shrimp	do	23	155	77
Imports:				
All edible fishery commodities	do	21,252	22,288	24,407
Fresh-water fish and eels, fresh or frozen	do	2,531	2,945	5,983
Canned tuna	do	242	514	227
Canned sardines	do	592	1,450	1,032
Cod, haddock, hake, etc., pickled or salted	do	2,370	4,706	2,813
Herring, pickled or salted	do	488	2,683	2,955
Crab meat, sauce, etc.	do	441	131	327
Lobsters, not canned	do	1,426	1,419	1,111
Lobsters, canned	do	42	51	208

1/ Includes all arrivals as reported by express and rail terminals, and truck receipts as reported by wholesale dealers including smokers.

2/ Data for individual cities are as of the last Thursday of the month, except those at Boston which are for the last Wednesday of the month, and those for geographical areas and the total of the United States which are as of the 15th of the month.

3/ From data compiled by the Bureau of Foreign and Domestic Commerce.

Note.--Data for the latest month are subject to revision.

PRINCIPAL FISHERY FIELD OFFICES AND LABORATORIES
OF THE FISH AND WILDLIFE SERVICE

Division of Fishery Industries

Boston, Mass.	B. E. Lindgren.....	253½ Northern Ave. Market News Service.....
Chicago, Ill.	E. C. Hinsdale.....	200 N. Jefferson St. Market News Service.....
College Park, Md.	J. M. Lemon.....	Fisheries Tech. Laboratory..
Jacksonville, Fla.	S. C. Denham.....	309 Duval Bldg. Market News Service.....
Ketchikan, Alaska.....	M. E. Stansby.....	Fisheries Tech. Laboratory..
Mayaguez, P. R.	J. F. Puncochar.....	Fisheries Tech. Laboratory..
New Orleans, La.	C. E. Peterson.....	1100 Decatur St. Market News Service.....
New York, N. Y.	W. H. Dumont.....	33-A Fulton St. Market News Service.....
San Pedro, Calif.	C. B. Tendick.....	Post Office Bldg. Fishery Statistics.....
Seattle, Wash.	V. J. Samson.....	417 Bell St. Terminal. Market News Service.....
Seattle, Wash.	R. W. Harrison.....	2725 Montlake Blvd. Fisheries Tech. Laboratory.....

Division of Fish Culture

Regional Headquarters

Albuquerque, N. Mex.	Theodore S. Kibbe.....	220 West Copper Ave. Reg.#2.
Atlanta, Ga.	John Blosz.....	316 Glenn Bldg. Reg. #4...
Boston, Mass.	Henry C. Markus.....	1140 Pk. Square Bldg. Reg. #5.
Minneapolis, Minn.	C. F. Culler.....	500 National Bldg. Reg. #3..
Portland, Oreg.	Alphonse Kemmerich.....	600 Weatherly Bldg. Reg. #1..

Division of Fishery Biology

Ann Arbor, Mich.	Dr. John Van Oosten.....	University Museums. Great Lakes Fish. Investigations
Beaufort, N. C.	Dr. Herbert F. Prytherch....	Fisheries Biological Laboratory.....
Cambridge, Mass.	W. C. Herrington.....	Room A-210 Harvard Biol. Lab. N.At.Fish. Investigations.
College Park, Md.	Robert A. Nesbit.....	Fish. Tech. Laboratory. Mid. & S. Atlantic Fish. Invest.
Columbia, Mo.	Dr. M. M. Ellis.....	101 Willis Ave. Interior Waters Investigations.....
Milford, Conn.	Dr. Victor Loosanoff.....	Fish. Laboratory. New England Oyster Investigations.
New Orleans, La.	M. J. Lindner.....	302 Custom House Bldg. 423 Canal St. Gulf Shrimp Inv.
Pensacola, Fla.	Dr. A. E. Hopkins.....	Box 1826. Gulf Oyster Investigations.....
Seattle, Wash.	Dr. F. A. Davidson.....	2725 Montlake Blvd. Fisheries Biological Laboratory.
Stanford University, Calif..	O. E. Sette.....	Room 450-B Jordan Hall. Pilchard Investigations.....

Division of Alaska Fisheries

Cordova, Alaska.....	Daniel W. Bates.....	Alaska Fisheries Service....
Juneau, Alaska.....	J. Steele Culbertson.....	Federal Bldg., Alaska Fisheries Service.....
Ketchikan, Alaska.....	Bertel W. Jonnson.....	Alaska Fisheries Service....
Seattle, Wash.	(Miss) Ted Murphy.....	706 Federal Bldg. Alaska Fisheries Service.....

FISH COOKERY IN THE OPEN

Special Memorandum 3215-A

Many of the inconveniences and annoyances that usually accompany our camping experiences can be eliminated through enlargement of our knowledge of fish cookery. "Fish Cookery in the Open" provides an opportunity to increase this knowledge.

This 25-page leaflet contains instructions for making and utilizing adequate fires, for preparing fish for cooking, and for cooking fish and shellfish. Recipes are included which cover frying, broiling, boiling, and baking fish, preparing sauces, making chowders, and cooking crawfish, shrimp, frog legs, crabs, clams, and oysters. The pamphlet also contains a generous offering of suggestions on other phases of camp operation and equipage.

Among the appetizing recipes appearing in this memorandum is the following:

Fish Chowder

3 pounds lean fish, cleaned, scaled, and with heads off	2/3 cup diced salt pork
3 cups sliced potatoes	1 quart milk
2/3 cup sliced onions	2 teaspoons salt
	1/4 teaspoon pepper

2 cups water

Dried whole milk prepared for general use may be substituted for fresh milk, increasing salt to about 3 teaspoons.

In a kettle of at least 1 gallon capacity, fry the pork to a golden brown, add the onions and fry to a light yellow. Then add the potatoes, seasoning, and water; mix the whole. Lay the fish on top and cook about 5 minutes or until flesh can be separated from bones and skin. Lift the fish out carefully, separate flesh from skin, fins, and all bones. Return clear flesh to kettle, stir just enough to mix with the potatoes and cook until the latter are soft. Add warm (but not boiled) milk. Add hard crackers just before serving.

"Fish Cookery in the Open" may be obtained upon request from the Fish and Wildlife Service, Washington, D. C.